

California Influenza and Respiratory Disease Surveillance for Week 14 (April 3–9, 2011)

Note: This report includes data from many different sources of influenza surveillance. The information contained in this report should be viewed as a “snapshot” of influenza activity for each surveillance week, and should not be considered as population-based data or representative of all California jurisdictions.

Based on declining influenza-like illness and laboratory detections in northern and southern California, influenza activity in California for Week 14 was downgraded to “local.”*

Influenza and Other Respiratory Disease Highlights (Week 14)

- With 71 sentinel providers reporting Week 14 data so far, influenza-like illness (ILI) activity decreased by 1.4% compared to the previous week. The ILI activity in California for Week 13 was “minimal.”**
- Of 162 specimens tested by polymerase chain reaction (PCR) statewide by the Respiratory Laboratory Network (RLN) during Week 14, 33 (20.4%) were positive for influenza; of these, 25 (75.8%) were influenza A and 8 (24.2%) were influenza B. Of the 25 influenza A specimens, 18 (72.0%) were subtyped as A (H3) and 7 (28.0%) were subtyped as A (2009 H1N1).
- The percentage of influenza detections in sentinel laboratories decreased during Week 14; 99 (7.5%) of 1,321 specimens tested were positive, compared to 141 (8.7%) of 1,628 specimens tested during the previous week.
- Of 65 influenza A (2009 H1N1) specimens tested by the CDPH Viral and Rickettsial Disease Laboratory (VRDL) for neuraminidase-inhibitor resistance during the 2010-11 influenza season, 1 (1.5%) has been found to have an H275Y mutation, which confers resistance to oseltamivir.
- During Week 14, the proportion of specimens tested statewide by RLN and sentinel laboratories that were positive for respiratory syncytial virus (RSV) continued to decrease; 54 (4.4%) of 1,224 specimens tested were positive, compared to 91 (6.1%) of 1,493 specimens tested during the previous week.

*Local activity is defined by the CDC as “outbreaks of influenza or increases in influenza-like illness (ILI) cases and recent laboratory-confirmed influenza in a single region of the state.”

**Activity levels range from minimal to high and are based on the percent of outpatient visits due to ILI compared to the average percent of ILI visits that occur during spring and fall weeks with little or no influenza virus circulation.

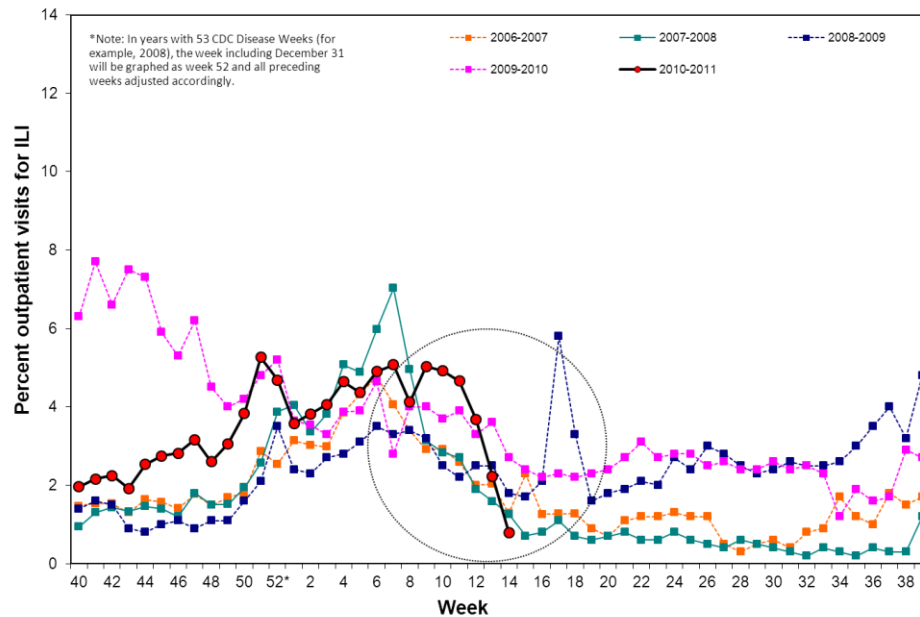
A. Syndromic Surveillance

CDC Influenza Sentinel Providers

Sentinel providers report the number of outpatient visits for ILI and the total number of visits per week. These data are reported weekly as a percentage of total visits due to ILI. The ILI case definition is fever (temperature of 100°F [37.8°C] or greater) and a cough and/or a sore throat in the absence of a known cause other than influenza.

The percentage of ILI visits decreased during Week 14 (0.8%) compared to the previous week (2.2%). A total of 71 sentinel providers have reported Week 14 data so far, compared to an average of 127 providers reporting in previous weeks. Some ILI visits during recent weeks may not yet be reported.

Figure 1. California Sentinel Providers – Influenza-Like Illness Visits, 2006-2011



B. Laboratory Update

1. Respiratory Laboratory Network (RLN) Surveillance Results

The RLN is composed of 28 local public health laboratories that offer PCR testing for influenza A and B and testing using the R-mix shell vial culture system to identify five other common respiratory viruses (RSV, adenovirus, and parainfluenza virus type 1-3).

The percentage of specimens that tested positive for influenza decreased in Week 14 (20.4%) compared to Week 13 (27.9%). Of 162 specimens tested by the RLN during Week 14, 25 (15.4%) were positive for influenza A and 8 (4.9%) were positive for influenza B. Of the 25 specimens that tested positive for influenza A, 18 (72.0%) were subtyped as influenza A (H3) and 7 (28.0%) were subtyped as influenza A (2009 H1N1) (Table 1).

Table 1. Respiratory Laboratory Network (RLN) Surveillance Results from Selected Laboratories*, April 3–9, 2011

	Total RLN*	Northern CA	Central CA	Southern CA
	No. (%)	No. (%)	No. (%)	No. (%)
Number of specimens tested by PCR	162	62	13	87
Influenza A	25 (15.4) [†]	10 (16.1) [†]	3 (23.1) [†]	12 (13.8) [†]
A (seasonal H1N1)	0 (0.0) [‡]	0 (0.0)	0 (0.0)	0 (0.0)
A (H3)	18 (72.0) [‡]	6 (60.0) [‡]	2 (66.7) [‡]	10 (83.3) [‡]
A (2009 H1N1)	7 (28.0) [‡]	4 (40.0) [‡]	1 (33.3) [‡]	2 (16.7) [‡]
Influenza B	8 (4.9) [†]	4 (6.5) [†]	2 (15.4) [†]	2 (2.3) [†]
Number of specimens tested by R-mix	32	1	22	9
RSV	0 (0.0) [¶]	0 (0.0)	0 (0.0)	0 (0.0)
Other respiratory viruses	0 (0.0) [¶]	0 (0.0)	0 (0.0)	0 (0.0)

* RLN labs reporting Week 14 data, by region:

Northern CA: Alameda, Contra Costa, Humboldt, Placer, Sacramento, San Francisco, Santa Clara, Shasta, Sonoma

Central CA: Fresno, San Joaquin, Stanislaus, Tulare

Southern CA: Imperial, Kern, Long Beach, Los Angeles, Orange, Riverside, San Diego, San Luis Obispo, Santa Barbara

[†] Percent of total specimens tested for influenza by PCR

[‡] Percent of influenza A positives

[¶] Percent of total specimens tested by R-mix

2. Sentinel Laboratory Surveillance Results

Sentinel laboratories are a network of clinical, commercial, academic, and hospital laboratories located throughout California that provide weekly data on the number of laboratory-confirmed influenza and other respiratory virus detections and isolations.

Table 2 shows positive influenza and RSV results reported from sentinel laboratories during Week 14. The percentage of specimens that tested positive for influenza decreased in Week 14 (99 of 1,321; 7.5%) compared to the previous week (141 of 1,628; 8.7%). Of the 99 influenza positive specimens, 52 (52.5%) were positive for influenza A and 47 (47.5%) were positive for influenza B. Of 1,192 specimens tested for RSV during Week 14, 54 (4.5%) were positive.

Table 2. Influenza and other respiratory virus detections from Sentinel Laboratories, April 3–9, 2011

	No. (%)
Number of sites reporting	52
Total specimens tested for influenza	1,321
Influenza	99 (7.5)*
Influenza A	52 (52.5)**,†
Influenza B	47 (47.5)**,‡
Total specimens tested for RSV	1,192
RSV	54 (4.5)*,¶

* Percent of total specimens tested

** Percent of specimens positive for influenza

Total number of positive lab results reported, by local health jurisdiction of patient's residence and/or site location:

† Alameda (9), Contra Costa (9), Fresno (2), Kern (1), Los Angeles (1), Madera (3), Monterey (1), Placer (2), Sacramento (2), San Diego (1), San Francisco (4), San Joaquin (1), San Mateo (1), Santa Clara (7), Solano (3), Sonoma (2), Stanislaus (3)

‡ Alameda (8), Contra Costa (5), Fresno (5), Long Beach (1), Los Angeles (1), Madera (1), Merced (1), Placer (3), Sacramento (6), San Diego (1), San Francisco (2), San Joaquin (1), San Mateo (2), Santa Clara (5), Solano (2), Sonoma (2), Stanislaus (1)

¶ Alameda (6), Contra Costa (2), Fresno (4), Imperial (1), Kern (1), Kings (1), Long Beach (3), Los Angeles (1), Monterey (1), Placer (5), Sacramento (6), San Diego (6), San Francisco (3), San Mateo (4), Santa Clara (5), Solano (3), Tulare (2)

3. Combined RLN and Sentinel Laboratory Surveillance Results

Figures 2 through 4 summarize the combined laboratory data from both the RLN and the sentinel laboratories. Figure 2 shows that influenza detections decreased in Week 14 (8.9%) compared to the previous week (10.8%). A total of 132 samples tested positive for influenza in Week 14, including 77 (58.3%) influenza A and 55 (41.7%) influenza B (Figure 3). Figure 4 shows that the percentage of RSV detections continued to decrease during Week 14, with 54 (4.4%) of 1,192 specimens testing positive for RSV, compared to 91 (6.1%) of 1,493 specimens in Week 13.

Figure 2. Influenza detections in Respiratory Laboratory Network and Sentinel Laboratories, 2006-2011

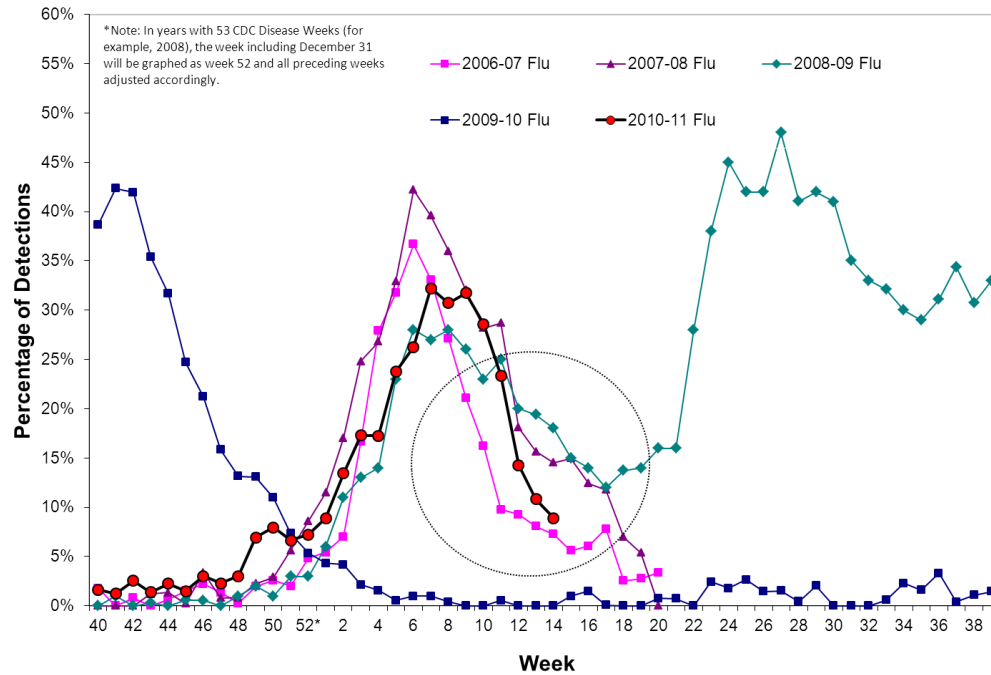


Figure 3. Influenza detections in Respiratory Laboratory Network and Sentinel Laboratories, by Influenza Type

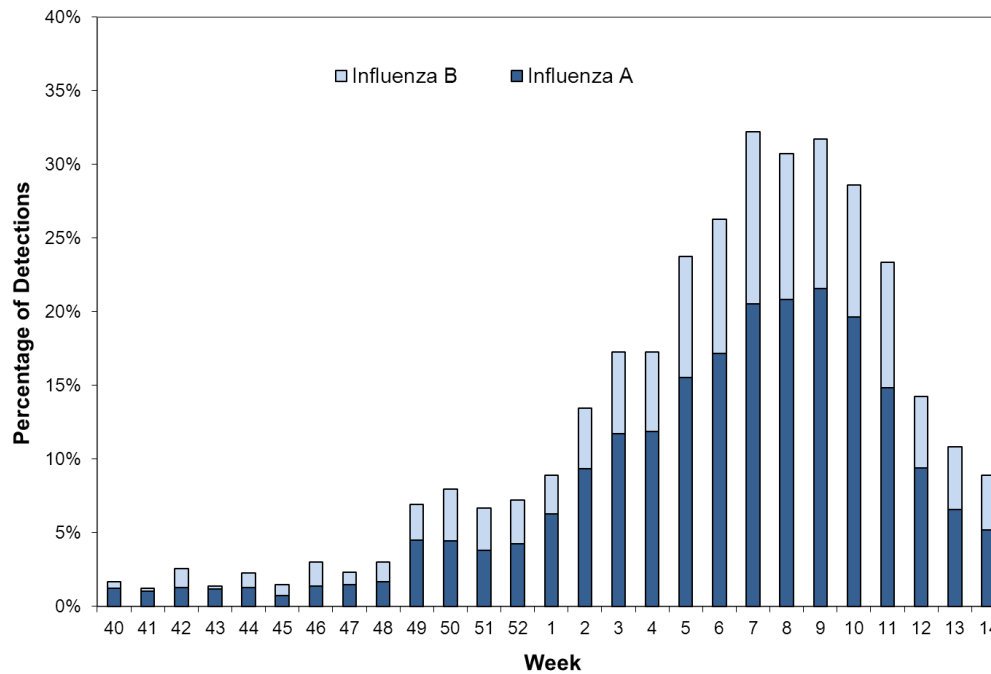
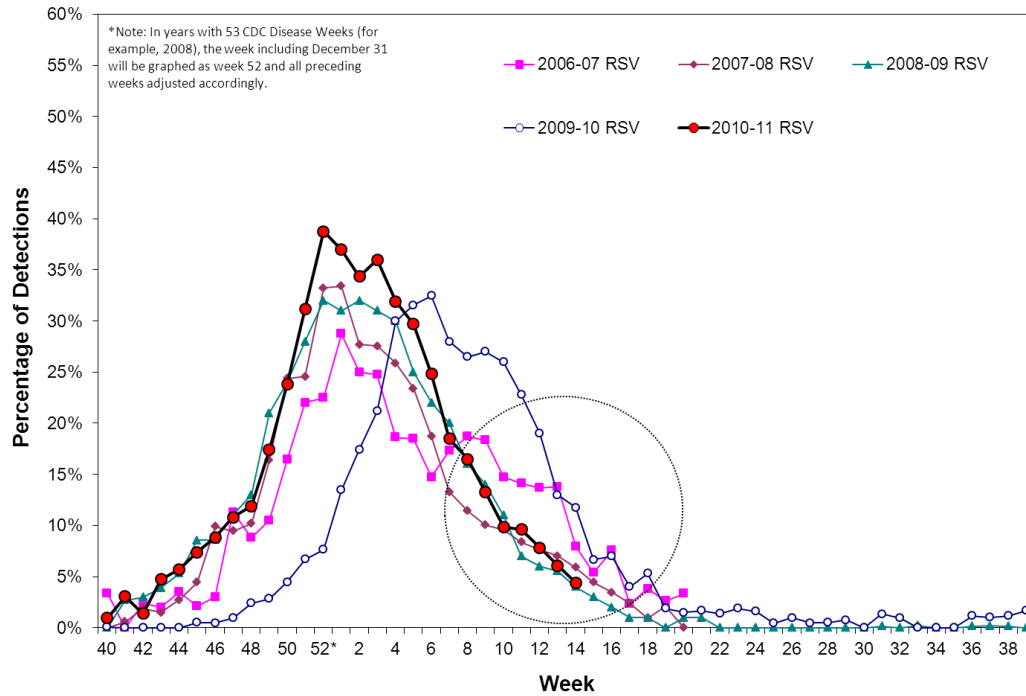


Figure 4. RSV detections in Respiratory Laboratory Network and Sentinel Laboratories, 2006-2011



For questions regarding this report or influenza surveillance and reporting in California, please email InfluenzaSurveillance@cdph.ca.gov. This account is monitored daily by several epidemiologists.

To obtain additional information regarding influenza, please visit the CDPH influenza website at [http://www.cdph.ca.gov/HealthInfo/discond/Pages/Influenza\(Flu\).aspx](http://www.cdph.ca.gov/HealthInfo/discond/Pages/Influenza(Flu).aspx).